BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and drains in front of Shriya Residency Near Old Police Station Amruthahalli in ward No 07 - Byatarayanapura, Kodigehalli Sub Division.

Est Cost: =40.0Lakh

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Varadaraju Layout Main road		1	270.00	0.65	0.40	70.20		
	1st cross road		1	30.00	0.65	0.40	7.80		
	left hand side c/s road 1		1	55.00	0.65	0.40	14.30		
			1	35.00	0.65	0.30	6.83		
			1	52.00	0.65	0.30	10.14		
			1	55.00	0.65	0.30	10.73		
	Culverts		5	6.80	1.85	0.85	53.47		
	Over Burden Earth								
			2	100.00	1.00	0.30	60.00		
							233.46	186.92	**43637.41**
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	BS Slab Drain	Sqm							
	Varadaraju Layout Main road		2	100.00	1.35	--	270.00		
	1st cross road		2	35.00	1.35	--	94.50		
			2	40.00	1.35	--	108.00		
			2	35.00	1.35	--	94.50		
							567.00		
	Consider 10% for missing and Damage Slabs						-56.70		
	BS Slab Cover								
			2	150.00	1.20	--	360.00		
							870.30	80.56	**70111.37**
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)								
	For BS Slab Drain / Missing	Sqm					56.70		
							56.70	665.68	**37744.06**
4	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Bed Concrete	Cum							
	Culverts		5.00	6.80	1.85	0.10	6.29		
							6.29	5348.76	**33643.70**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
5	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2015-16)								
	Culverts	Cum							
			10.00	6.80	0.60	0.90	36.72		
							36.72	4438.22	**162971.44**
6	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.112, I.No.15.1 of PW, P&IWTD S.R 2015-16)								
	Culverts	Sqm							
			10.00	6.80	--	0.90	61.20		
							61.20	102.82	**6292.58**
7	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2015-16)								
	Coping	Cum							
	Culverts		10.00	6.80	0.60	0.100	4.08		
							4.08	5767.46	**23531.24**
8	Providing and fixing **RCC Precast cover slab of 250mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Culvert Slab	Sqm							
			5.00	6.80	1.80	--	61.20		
							61.20	5317.00	**325400.40**
9	KSRRB M300- Scarifying Existing Granular Surface to a Depth of 50mm by Manual Means. KSRRB M300-52.1. Scarifying the existing granular road surface to a depth of 50mm and disposal of scarified material and complete as per specifications. MORTH Specification No. 305.4.3 (P.No.148, I.No.19.58 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Sqm							
	Varadaraju Layout Main road		1	270.00	6.30		1701.00		
	1st cross road		1	30.00	5.00		150.00		
	left hand side road		1	55.00	5.00		275.00		
			1	35.00	7.50		262.50		
			1	52.00	6.00		312.00		
			1	55.00	7.00		385.00		
							3085.50	46.2	**142550.10**
10	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Varadaraju Layout Main road		1.00	270.00	6.30	0.25	425.25		
	1st cross road		1.00	30.00	5.00	0.20	30.00		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	left hand side road		1.00	55.00	5.00	0.20	55.00		
			1.00	35.00	7.50	0.20	52.50		
			1.00	52.00	6.00	0.20	62.40		
			1.00	55.00	7.00	0.20	77.00		
							702.15	1768.08	**1241457.37**
	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Varadaraju Layout Main road		1	270.00	6.30	--	1701.00		
	1st cross road		1	30.00	5.00	--	150.00		
	left hand side road		1	55.00	5.00	--	275.00		
			1	35.00	7.50	--	262.50		
			1	52.00	6.00	--	312.00		
			1	55.00	7.00	--	385.00		
							3085.50	29.68	**91577.64**
11	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying DBM	Sqm							
	Varadaraju Layout Main road		1	270.00	6.30	--	1701.00		
	For Laying BC								
	Varadaraju Layout Main road		1	270.00	6.30	--	1701.00		
	1st cross road		1	30.00	5.00	--	150.00		
	left hand side road		1	55.00	5.00	--	275.00		
			1	35.00	7.50	--	262.50		
			1	52.00	6.00	--	312.00		
			1	55.00	7.00	--	385.00		
							4786.50	12.72	**60884.28**
12	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.162 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								
	For Laying DBM	Cum							
	Varadaraju Layout Main road		1.00	270.00	6.30	0.05	85.05		
							85.05	7036.28	**598435.61**
13	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	Varadaraju Layout Main road		1	270.00	6.30	0.04	68.04		
	1st cross road		1	30.00	5.00	0.04	6.00		
	left hand side road		1	55.00	5.00	0.04	11.00		
			1	35.00	7.50	0.04	10.50		
			1	52.00	6.00	0.04	12.48		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
			1	55.00	7.00	0.04	15.40		
							123.42	8013.60	**989038.51**
14	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	497.00	0.10	--	99.40		
							99.40	542.72	**53946.37**
							Total Construction Cost		**3881222.076**
15	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**1392.18**	27.00	**37589.00**
	Waste = 123.42 X 141 X 8 / 100 = 1392.18								
16							**Cost towards Preparation of DPR LS**		**38813.00**
17							**Cost towards PMC / Third Party inspection LS**		**38813.00**
								Sub Total	**3996437.08**
18							**Miscellaneous and rounding off**		**3562.92**
								Total	**4000000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

For Tejus Consultants

Assistant Engineer

Assistant Executive Engineer

Executive Engineer

KEY MAP: 10. VARADRAJU LAYOUT OLD POLICE STATION SHRIYA RESIDENCY